

Sixth Annual Report
Falconbridge Nickel Mines
Limited

*For the Year Ending
December 31st, 1934*

Falconbridge Nickel Mines Limited

Falconbridge - Ontario



PRESIDENT

THAYER LINDSLEY

VICE-PRESIDENTS

HALSTEAD LINDSLEY

J. GORDON HARDY

SECRETARY and TREASURER

NORMAN F. PARKINSON

DIRECTORS

THAYER LINDSLEY

HALSTEAD LINDSLEY

J. GORDON HARDY

W. S. MORLOCK

NORMAN F. PARKINSON

GENERAL SUPERINTENDENT

ERNEST CRAIG, Falconbridge, Ontario

CONSULTING METALLURGIST

ANTON GRONNINGSATER

TRANSFER AGENTS and REGISTRARS

TORONTO SHARE TRANSFER COMPANY, LIMITED
25 King St. West, Toronto

AUDITORS

CLARKSON, GORDON, DILWORTH, GUILFOYLE & NASH
Toronto

FALCONBRIDGE NICKEL MINES LIMITED

Report of Directors

To the Shareholders,
Falconbridge Nickel Mines Limited.

28th January, 1935.

I submit herewith the reports of the Directors, the Auditors, the Vice-President and Consulting Engineer, the Consulting Metallurgist, and the General Superintendent for the year ending December 31st, 1934.

Your company has continued to make progress during the past year and the improvements to Plant at the Mine and Refinery in this and previous years, have contributed to the rounding out of a smooth running operation. There still remains the work on the new shaft and its accompanying equipment, which should be completed during 1936.

Your company has acquired during the year the extensive nickel land owned by the Sudbury Nickel and Copper Company for 40,052 shares of your Capital Stock. Although still entirely unproved, nevertheless these lands present good geological opportunities for finding ore, and in time should afford, together with the large positive and possible reserves at Falconbridge, a basis for the future growth of your company.

Since there are signs that the worst of the post war depression is over for most countries, it may be interesting to review here the financial history of your company to date. The following tabulation begins with the first full year of your operations, which coincides with the first full year of the depression:—

Year	Tons Treated	Net Sales	Net Current Assets inc. Metal Inventories (at cost or lower) and Accts. Receivable Not including Broken Ore
1930	71,626	\$ 68,726.89	\$ 860,073.15
1931	109,520	1,211,229.95	1,117,713.88
1932	123,306	2,787,917.78	1,761,891.59
1933	232,661	2,808,328.92	1,959,058.38
1934	272,923	4,001,551.55	2,593,886.71

Year	Gross Profit After Taxes	Net Profit after Taxes, Def. Dev't. and Dep'n.
1930	Loss	Loss
1931	\$ 173,652.18	\$ 10,530.69
1932	1,014,378.90	762,420.54
1933	1,505,396.93	1,122,999.28
1934	1,924,251.00	1,415,886.03

Forward sales at the end of the year were in a better position than in any previous year, and the indications are that the natural economic forces are gradually beginning to take effect in most countries in spite of continuing political disturbances.

With respect to the judgment rendered against the company in the Lower Courts in Norway and in the amount of some £15,000 sterling, appeal to the Supreme Court is still pending.

The Directors wish to record their grateful appreciation of the successful results attained during the year to Mr. J. Gordon Hardy, Mr. Anton Gronningsater, Mr. Ernest Craig, and the entire staff. They also recognize the good work of your sales agent in New York and London, Messrs. Brandeis, Goldschmidt & Company, Limited.

On behalf of the Board,

T. Lindsley,
President.

Toronto, January 24th, 1935.

Mr. Thayer Lindsley, President,
and the Board of Directors,
Falconbridge Nickel Mines Limited.

Dear Sirs:

I would draw together and amplify the accompanying reports of Messrs. Craig and Gronningsater, by the following comments on your 1934 operations.

MINE

Stoping of ore in your mine during the year not only broke enough to satisfy the treatment plant requirements, but added 100,962 tons, to the Broken Ore Reserve, which stood at 509,742 tons at the end of the year. The location of the areas worked can be noted by comparing the 1933 mine-map with the one accompanying this year's reports. The tendency in our stoping is to break wider than originally calculated, with consequent increase of tonnage and lowering of grade. Justification for this is found in the fact that the cost of producing nickel in matte has progressively lowered in spite of lowered grade in the ore.

With mine-production in 1934 having settled into its present tonnage routine, it was found possible to apply hoisting capacity to a modest campaign of development in new ground. The 500 level was selected as the horizon on which to open-up the known eastern orebody, which had been to some extent drilled from surface. In drifting towards it along the norite-sedimentary contact, another and intermediate stretch of ore was encountered—as shown on the present map—and will be further developed. By the end of the year the eastern orebody had been developed on the 500-ft. horizon over a length of 1,000 feet, with ore still in the eastern face. Down to the stated horizon this new ore is considerably lower in grade, but that may well change on other levels, and in any case it is fully commercial. It has permitted us to take enough new tonnage into Ore Reserves to offset all drawings from these Reserves during the year, and add to them substantially.

As the capacity of our present shaft is taxed to the limit by the actual ore-demands of our treatment plants, the sinking of a new and larger shaft was put in hand during the year. When completed it will permit more vigorous development efforts, both laterally and to greater depth, which otherwise could only be accomplished by curtailing our present production program.

Ore Reserves—as said—show an increase in tonnage over 1933, and stand at 2,960,238 tons with 2.04% nickel and .90% copper contents. The grade of these Reserves has been radically lowered, both by inclusion of the East Orebody and by recasting the older areas opened. Any question that may be raised by this lowered grade is happily answered by pointing to its coincidence with the grade of ore treated in 1934—a quite successful year.

TREATMENT PLANT

No important changes occurred during the year in the milling and smelting plants. It was rather a year of crowding the existing facilities to their utmost. But in spite of this crowding for production, the time lost in repairing and maintaining our one-unit plant was less than last year—though still unavoidably heavy. The result was that 272,923 tons were treated, or 17% more than the previous year. The comparison between these years, as to grade, recovery and losses, shows as follows:

	1934		1933	
	Nickel %	Copper %	Nickel %	Copper %
Grade of Ore Treated	2.050	.995	2.163	.986
Recovered in Matte	1.906	.898	2.006	.904
Metallurgical Losses	.144	.097	.157	.082

The consequent production of matte for shipment to the Refinery in Norway totalled 9271.4 short tons containing 10,405,200 pounds of nickel and 4,901,600 pounds of copper,

plus some precious metals. At the present time research is under way looking for means to still further improve output.

REFINERY

Refined metals produced during the period under review totalled 11,692,746 pounds nickel and 6,241,125 pounds copper. Of these 9,508,939 pounds nickel and 4,633,235 pounds copper were for account of Falconbridge, the balance being refined for a toll customer. In addition precious metals were recovered which sold for \$82,000; all for Falconbridge account. In line with the constant seeking to still further improve operating conditions, considerable construction work had again to be done at the Refinery, as experience dictated betterments.

WELFARE

The community at Falconbridge is growing into a considerable social unit and this brings added responsibility upon the company to provide adequate housing and utilities. These have in the past year received additions costing around \$60,000. The payroll covered an average of 426 men employed daily—including staff. The school has had to be twice enlarged and now accommodates 150 children. At the Refinery in Norway the housing question has not been uppermost, due to the proximity of the town of Kristiansand, but welfare of the 300 employees has been properly looked after. A pension scheme has been instituted for the staff and foremen, to which the company contributes; general labor being well cared for in this regard by the local Municipality. The working forces at mine, reduction plants, and refinery are representative of a high type of labor, and of course affect to a very large degree the commercial results obtained.

MARKETING

Betterment in world conditions has been reflected in the increasing takings of the company's products. Sales of nickel during the year for Falconbridge account totalled 9,577,426 pounds, together with 4,515,327 pounds of copper, and the precious metals above mentioned. Prices slipped back slightly towards the end of the year, due largely to more stabilized currency exchanges, but continued to be satisfactory. By continued effort reserve stocks of matte and refined metals—over and above insistent demands—have been accumulated, and bookings of forward sales at the year end are the largest in the company's history.

It is always a pleasure to acknowledge gratefully the consistent efforts of the staff and employees.

Your very truly,
J. Gordon Hardy,
Consulting Engineer.

Dividends Paid by Falconbridge Nickel Mines Limited

No.	Record Date	Per Share	Total
1	Jan. 14, 1933	10c	\$320,390.50
2	June 15,	10	328,105.52
3	Dec. 15,	5	164,113.95
4	Mar. 15, 1934	5	163,935.25
5	June 15,	5	163,935.25
6	Apr. 12,	10	328,170.50
7	Dec. 11	7½	246,132.02
			\$1,714,782.99

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Consolidated Balance S
with Comparative Figur

ASSETS		1934	1933
Current Assets—			
Cash on hand and in Banks in Canada, United States and Norway		\$ 605,594.10	\$ 513,812.39
Accounts Receivable—Trade		111,742.78	205,312.06
—Sundry		23,381.90	15,715.01
—Ventures Limited		86.19	
Securities at cost			\$ 600,676.20
Bonds—Dominion and Provincial	\$ 399,438.00		
Railway, Power and Industrial	110,325.00		
(Market value \$545,147.00)		509,763.00	
Stocks—Mining Companies	\$ 573,387.35		
Railway, Industrial, etc.	77,344.34		
(Market value \$914,665.30)		650,731.69	
Investment in Associated Companies Shares		29,955.50	
		<u>\$1,931,255.16</u>	<u>\$1,335,515.66</u>
Amount Receivable on Investments sold (In Suit)			\$ 30,000.00
Inventory—Refined Metals at cost	\$ 287,200.88		\$ 295,850.59
Matte on hand and in Process at cost	520,577.19		450,868.40
		<u>\$ 807,778.07</u>	<u>\$ 746,718.99</u>
Property Account—			
Mine, Smelter and Refinery Buildings, Machinery and Equipment	\$ 3,411,595.42		\$ 3,205,893.15
Less: Depreciation Written Off	1,253,536.62		849,882.55
	<u>\$2,158,058.80</u>		<u>\$2,356,010.60</u>
Mining Properties and Claims	2,768,915.61		2,597,046.12
	<u>\$4,926,974.41</u>		<u>\$4,953,056.72</u>
Deferred Expenditures, Supplies, etc.—			
Mine Development Expenditures Less Amounts Written Off to Mining Operations	\$ 244,657.83		\$ 227,009.42
Broken Ore in Stopes	200,000.00		186,954.46
Mining and Refinery Supplies, etc.	149,864.16		128,658.56
Prepaid Expenses and Deferred Charges	54,177.46		15,797.78
	<u>\$ 648,699.45</u>		<u>\$ 558,420.22</u>
Raffineringsverket Aktieselskap—			
Special Advance recoverable as a tonnage charge on customs metal as and when refined, less re-payments	\$ 145,736.79		\$ 176,073.62
Deposit with Municipality of Kristiansand re power supply	\$ 50,280.00		
	<u>\$8,510,723.88</u>		<u>\$7,799,785.21</u>

AUDITORS'

We have audited the accounts of Falconbridge Nickel Mines Limited for the year ended 31st December 1934. The consolidated Balance Sheet the Assets and Liabilities of Falconbridge Nikkelverk Aktieselskap as certified by the consolidated Balance Sheet correctly sets forth the combined position of the Companies given us.

Toronto, 1st February, 1935.

MINES LIMITED

subsidiary

K. AKTIESELSKAP

31st December, 1934

31st December, 1933

LIABILITIES

Capital Stock—	1934	1933
Authorized 5,000,000 shares No Par Value		
Issued at 31st December, 1933.....3,278,705 shares	\$6,808,131.64	
Issued during 1934 for properties..... 43,052 shares	147,876.80	
Issued at 31st December, 1934.....3,321,757 shares	\$6,956,008.44	\$6,808,131.64
Current Liabilities—		
Accounts Payable	\$ 102,101.65	\$ 94,884.69
Wages Payable	41,643.67	27,269.08
Unclaimed Dividends	1,401.20	1,022.50
Reserve for Taxes	176,861.96	133,000.00
	\$ 322,008.48	\$ 256,176.27
Commission Payable re Overdue Subscriptions.....		\$ 30,000.00
Interest not taken into Revenue.....	\$ 76,096.02	\$ 62,579.37
Earned Surplus	\$1,156,610.94	\$ 642,897.93
Contingent Liability—31st December, 1934 and 1933—		
Judgment has been rendered against the Company for Approximately £15,000 Sterling but appeal has been entered and is now pending before the Supreme Court of Norway.		

On Behalf of the Board:

T. Lindsley, Director.

J. Gordon Hardy, Director.

\$8,510,723.88

\$7,799,785.21

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31st December, 1934, and have incorporated in the above Consolidated Balance Sheet of the Company. Subject thereto, we report that in our opinion the above Consolidated Balance Sheet, 1934, according to the best of our information and the explanations

CLARKSON, GORDON, DILWORTH, GUILFOYLE & NASH,

Chartered Accountants.

FALCONBRIDGE NICKEL MINES LIMITED

and its Wholly Owned Subsidiary

FALCONBRIDGE NIKKELVERK AKTIESELSKAP

Consolidated Earnings Statement Year 1934

Metal Sales (Gross).....	\$4,265,028.81	
Less: Selling and Delivery Expense and Foreign Exchange Adjustment	263,477.26	\$4,001,551.55
Add: Increase in Metal Inventories.....		61,059.08
Operating Costs—Mining, Smelting, Refining, etc.....	\$2,012,683.57	\$4,062,610.63
Administrative and General Expense.....	63,880.03	2,076,563.60
Operating Profit before providing for Taxes, Deferred Development and Depreciation.....		\$1,986,047.03
Non-Operating Revenue.....		84,464.23
Provision for Taxes.....		\$2,070,511.26
		163,857.68
Profit for the Year before providing for Deferred Development and Depreciation.....		\$1,906,653.58
Deferred Development written off.....	\$ 104,710.90	
Depreciation	403,654.07	508,364.97
Profit on Sale of Securities.....		\$1,398,288.61
		17,597.42
Net Profit for the year transferred to Consolidated Earned Surplus		<u>\$1,415,886.03</u>

Consolidated Earned Surplus Account 31st December, 1934

Balance 31st December, 1933.....	\$ 642,897.93
Net Profit for year 1934, as above.....	1,415,886.03
Dividends Paid:	<u>\$2,058,783.96</u>
No. 4 paid March 30th — 5c per share \$ 163,935.25	
No. 5 paid June 29th — 5c per share 163,935.25	
No. 6 paid September 27th— 10c per share 328,170.50	
No. 7 paid December 20th— 7½c per share 246,132.02	902,173.02
Balance 31st December, 1934, carried to Balance Sheet....	<u>\$1,156,610.94</u>

FALCONBRIDGE NICKEL MINES LIMITED

SIXTH ANNUAL REPORT YEAR 1934

Falconbridge, Ontario,
January 21st, 1935.

Mr. Thayer Lindsley, President,
and Directors,
Falconbridge Nickel Mines Limited.

Dear Sirs,

Covering plant operation for the fiscal year ended December 31st, 1934, I beg to submit the following.

Such interruptions as were experienced to continued operation of mine and reduction plants were entirely due to necessary periodic repairs to blast furnace and settler.

MINE DEVELOPMENT

Development footages attained during the year and combined over all levels, distribute as tabulated below.

Drifting and Cross-Cutting	4,054 feet
Raising	1,122 feet
Stope Entrances	130 feet
Box Holes	7 only
Diamond Test Drilling	2,597 feet
Diamond Drilling (Surface)	405 feet
Station Cutting	6,700 cu. ft.
Shaft Sinking	546 feet

All development work during the year was carried out within the area in which ore reserves were computed in 1933, with the exception of the East drive on the 500-foot level.

Of the total 4,054 feet of drifting and cross-cutting, 2,577 feet was driven East on the 500-foot level. This work served to open up the Eastern ore bodies and to provide a connection with No. 5 shaft. Intensive faulting, encountered in some sections, reduced the ore possibilities at this horizon. One body however, extending for 500 feet and disclosing fair widths, was opened up, while the last 1,100 feet of the drive was in ore of widths varying between 10 and 40 feet but of a grade considerably reduced by the presence of large amounts of quartz. The limits of this body have not yet been reached.

On the 750-foot level an advance of 610 feet West disclosed 575 feet of good ore. The East drive was continued for 233 feet with ore to 120 feet, at which point the main fault was encountered.

NO. 5 SHAFT

Preparation for sinking a five-compartment shaft at a location some 2,400 feet East from the present working shaft was made early in the summer. This shaft is thirteen feet

four inches by nineteen feet six inches, outside timber, and will be continued to a depth of 1,500 feet.

The depth of overburden having been established at 100 feet by means of an electrical survey and checked by one bore hole, excavation of the shaft was commenced in June. Sinking through the overburden was accomplished by excavating inside a steel plate shield, the excavation being followed by timber sets spaced at three-foot centres and closely lagged. After reaching bed-rock, in order to seal off the water and quicksand encountered there and also to reinforce the shaft through the sand, a concrete lining was poured inside the timber and continued to surface. Permanent steel sets were then placed in position at six-foot centres in this concreted section. Sinking in rock was started in September and a total depth of 546 feet from surface had been reached by the end of the year. A station was cut at the 500-foot level, where connection was made with the East drift.

ORE RESERVES

Ore reserves, computed as at December 31st, 1934, are tabulated hereunder.

Ore Reserves as at December 31st, 1933	2,817,884 tons
Plus New Ore added 1934	460,000 tons
TOTAL	3,277,884 tons
Less: Drawn during 1934	317,646 tons
Total Ore Reserves December 31st, 1934	2,960,238 tons

(Averaging—2.04 Ni.—.90 Cu.)

MINING

Results of mining activities during the year are set out in the following table.

Broken Ore—In Stopes

Balance December 31st, 1933	408,780 tons
Broken During 1934	386,051 tons
TOTAL	794,831 tons
Less: Hoisted from Stopes during 1934	285,089 tons
Broken Ore Reserves December 31st, 1934	509,742 tons

Ore Hoisted

From Stopes, 1934	285,089 tons
From Development, 1934	14,085 tons
From Concentrating Dump, 1934	18,472 tons
Total Ore to Crushing Plant, 1934	317,646 tons

The map attached shows the stoping area and location of Broken Ore.

CRUSHING, SORTING AND TRANSPORTATION

From 317,646 tons of ore delivered to the crushing plant, 44,116 tons or 13.9% of waste was eliminated by sorting and discarded. The balance, amounting to 273,530 tons, was transported over the aerial tramway to the Treatment Plant bins.

REDUCTION PLANT

The entire Reduction Plant was in operation 337.46 days during the year. Periodic repair campaigns, necessary in the one-unit plant, account for the whole of lost operating time.

Results of operation tabulate as below.

Total Ore Treated	272,923	short tons
Matte Produced	9,271.4	short tons
Nickel in Matte Produced	5,202.6	short tons
Copper in Matte Produced	2,450.8	short tons
Metals per ton in Ore	41.00 lbs. Ni.—19.90 lbs. Cu.	
Metallurgical Losses per ton of Ore	2.88 lbs. Ni.—1.94 lbs. Cu.	

CONSTRUCTION

With the exception of temporary installations of equipment to facilitate the sinking of No. 5 shaft, practically no additions or alterations to the plant were undertaken during the year.

GENERAL

Housing facilities were further increased during the year and an up-to-date sewage disposal system was installed. Sewerage and water systems were also extended to provide adequate service and fire protection throughout plant and townsite.

To the staff and employees I wish to accord my gratification for their faithful and competent support.

Respectfully submitted,
E. Craig,
General Superintendent.

Toronto, Ontario,
January 25th, 1935.

Mr. Thayer Lindsley, President,
and Board of Directors,
Falconbridge Nickel Mines Limited.

Dear Sirs:

I beg to submit the following report for the fiscal year ending December 31st, 1934.

MILL AND SMELTER

The mill and smelter operated throughout the year with only the normal interruptions for repairs. The excellent overall metallurgical recovery was slightly improved.

REFINERY

The Refinery operated very steadily throughout the year, although with a little less than normal capacity during the first few months due to adjustment of new equipment.

A certain amount of additions and alterations took place, more to improve and stabilize operating conditions than to increase capacity, although this at the end of the year was very ample for 6,000 short tons annually and some months exceeded this rate.

Custom matte was received regularly, from February at the increased rate of 1,000 long tons nickel annually.

The plant for separation of precious metals was finished during the year and is gradually coming into routine.

Research work and experiments are going on to further improve the recovery and high quality of the metals, and some small further progress has been made.

For the year 1934, the amount of metals in matte received from the Smelter, the Refinery production, the metals in process and metals in matte on hand at the end of the year is set out in the following table:

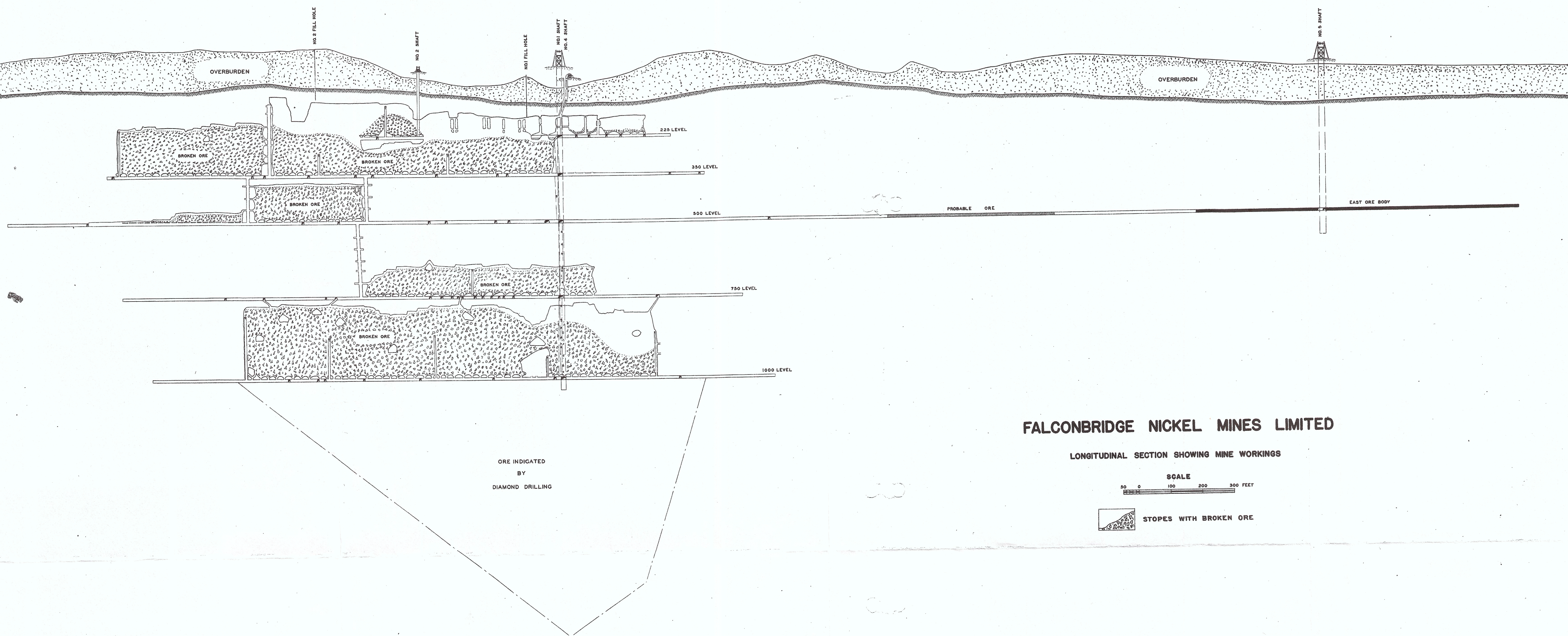
	Ni., Lbs.	Cu., Lbs.
Metals in Falconbridge Matte Received, less refining losses	9,924,129	4,626,535
Produced in marketable form during the year	9,508,939	4,633,235
Metals in process of refining at end of year	1,953,277	402,976
Metals in Matte on hand at end of year	1,355,139	604,058

Respectfully submitted,

Anton Gronningsater,
Consulting Metallurgist.

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FALCONBRIDGE NICKEL MINES LIMITED

LONGITUDINAL SECTION SHOWING MINE WORKINGS

